

WHAT IS CLAIMED IS:

1. A releasable touch fastener comprising
a loop component having a sheet-form loop base and an array of female fastener
elements extending from the loop base; and
a hook component having a sheet-form hook base and an array of male fastener
5 elements extending from the base and configured to releasably engage the female fastener
elements of the loop component;
wherein the touch fastener has an Engaged Thickness of less than about 0.11 inch,
and
wherein the hook and loop components are so configured to provide a Final Peel
10 Resistance of at least 0.3 pound per inch of closure width.

2. The releasable touch fastener of claim 1 wherein the hook and loop
components are so configured to provide an Initial Peel Resistance of at least 0.5 pound per
inch of closure width.

3. The releasable touch fastener of claim 1 wherein the hook and loop
components are so configured to provide an Initial Shear Resistance of at least 10 pounds per
square inch.

4. The releasable touch fastener of claim 1 wherein the hook component has a
Stitch Hole Tear Strength of at least 2.0 pounds.

5. The releasable touch fastener of claim 4 wherein the hook base comprises a
sheet of resin and the male fastener elements have stems extending contiguously from the
sheet of resin, and wherein the Stitch Hole Tear Strength is at least 5.0 pounds.

6. The releasable touch fastener of claim 5 wherein the hook base includes a
fabric backing laminated to a side of the hook base opposite the fastener elements.

7. The releasable touch fastener of claim 1 wherein the hook base comprises a sheet of resin, and wherein the male fastener elements have stems extending contiguously from the sheet of resin.

5 8. The releasable touch fastener of claim 7 wherein the male fastener elements have molded crooks.

9. The releasable touch fastener of claim 8 wherein each male fastener element has two crooks extending in opposite directions along the hook base.

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10. The releasable touch fastener of claim 7 wherein the fastener elements are arranged in a density of at least 350 fastener elements per square inch of the base.

11. The releasable touch fastener of claim 7 wherein the stems have opposing
15 surfaces defined by severed resin.

12. The releasable touch fastener of claim 1 wherein the loop component comprises a woven fabric.

20 13. The releasable touch fastener of claim 12 wherein the hook base comprises a sheet of resin, and wherein the male fastener elements have stems extending contiguously from the sheet of resin.

25 14. The releasable touch fastener of claim 1 wherein the Engaged Thickness is less than 0.10 inch.

15. The releasable touch fastener of claim 14 wherein the Engaged Thickness is less than 0.09 inch.

30 16. The releasable touch fastener of claim 15 wherein the Engaged Thickness is less than 0.08 inch.

17. The releasable touch fastener of claim 1 wherein the Final Peel Resistance is at least 0.4 pound per inch of closure width.

5 18. The releasable touch fastener of claim 17 wherein the Final Peel Resistance is at least 0.5 pound per inch of closure width.

19. A releasable touch fastener comprising
a loop component having a sheet-form loop base and an array of female fastener
10 elements extending from the loop base; and
a hook component having a sheet-form hook base and an array of male fastener
elements extending from the base and configured to releasably engage the female fastener
elements of the loop component;

15 wherein the touch fastener has an Engaged Thickness of less than about 0.11 inch,
and

wherein the male and female fastener elements are so configured to provide an Initial
Peel Resistance of at least 0.5 pounds per inch of closure width.

20. The releasable touch fastener of claim 19 wherein the hook and loop
20 components are so configured to provide an Initial Shear Resistance of at least 10 pounds per
square inch.

21. The releasable touch fastener of claim 19 wherein the hook component has a
Stitch Hole Tear Strength of at least 2.0 pounds.

25 22. The releasable touch fastener of claim 21 wherein the hook base comprises a
sheet of resin and the male fastener elements have stems extending contiguously from the
sheet of resin, and wherein the Stitch Hole Tear Strength is at least 5.0 pounds.

30 23. The releasable touch fastener of claim 22 wherein the hook base includes a
fabric backing laminated to a side of the hook base opposite the fastener elements.

24. The releasable touch fastener of claim 19 wherein the hook base comprises a sheet of resin, and wherein the male fastener elements have stems extending contiguously from the sheet of resin.

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25. The releasable touch fastener of claim 24 wherein the male fastener elements have molded crooks.

26. The releasable touch fastener of claim 24 wherein each male fastener element has two crooks extending in opposite directions along the hook base.

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27. The releasable touch fastener of claim 24 wherein the fastener elements are arranged in a density of at least 350 fastener elements per square inch of the base.

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28. The releasable touch fastener of claim 24 wherein the stems have opposing surfaces defined by severed resin.

29. The releasable touch fastener of claim 19 wherein the loop component comprises a woven fabric.

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30. The releasable touch fastener of claim 29 wherein the hook base comprises a sheet of resin, and wherein the male fastener elements have stems extending contiguously from the sheet of resin.

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31. The releasable touch fastener of claim 19 wherein the Engaged Thickness is less than 0.10 inch.

32. The releasable touch fastener of claim 31 wherein the Engaged Thickness is less than 0.09 inch.

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33. The releasable touch fastener of claim 32 wherein the Engaged Thickness is less than 0.08 inch.

5 34. The releasable touch fastener of claim 19 wherein the Initial Peel Resistance is at least 0.6 pound per inch of closure width.

35. The releasable touch fastener of claim 34 wherein the Initial Peel Resistance is at least 0.69 pound per inch of closure width.

10 36. The releasable touch fastener of claim 35 wherein the Initial Peel Resistance is at least 0.8 pound per inch of closure width.

37. A releasable touch fastener comprising
a loop component having a sheet-form loop base and an array of female fastener
15 elements extending from the loop base; and
a hook component having a sheet-form hook base and an array of male fastener
elements extending from the base and configured to releasably engage the female fastener
elements of the loop component;
wherein the touch fastener has an Engaged Thickness of less than about 0.11 inch,
20 and
wherein the male and female fastener elements are so configured to provide an Initial
Shear Resistance of at least 10 pounds per square inch.

25 38. The releasable touch fastener of claim 37 wherein the hook component has a Stitch Hole Tear Strength of at least 2.0 pounds.

39. The releasable touch fastener of claim 38 wherein the hook base comprises a sheet of resin and the male fastener elements have stems extending contiguously from the sheet of resin, and wherein the Stitch Hole Tear Strength is at least 5.0 pounds.

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40. The releasable touch fastener of claim 39 wherein the hook base includes a fabric backing laminated to a side of the hook base opposite the fastener elements.

41. The releasable touch fastener of claim 37 wherein the hook base comprises a sheet of resin, and wherein the male fastener elements have stems extending contiguously from the sheet of resin.

42. The releasable touch fastener of claim 41 wherein the male fastener elements have molded crooks.

43. The releasable touch fastener of claim 41 wherein each male fastener element has two crooks extending in opposite directions along the hook base.

44. The releasable touch fastener of claim 41 wherein the fastener elements are arranged in a density of at least 350 fastener elements per square inch of the base.

45. The releasable touch fastener of claim 41 wherein the stems have opposing surfaces defined by severed resin.

46. The releasable touch fastener of claim 37 wherein the loop component comprises a woven fabric.

47. The releasable touch fastener of claim 46 wherein the hook base comprises a sheet of resin, and wherein the male fastener elements have stems extending contiguously from the sheet of resin.

48. The releasable touch fastener of claim 37 wherein the Engaged Thickness is less than 0.10 inch.

49. The releasable touch fastener of claim 48 wherein the Engaged Thickness is less than 0.09 inch.

50. The releasable touch fastener of claim 49 wherein the Engaged Thickness is less than 0.08 inch.

5 51. The releasable touch fastener of claim 37 wherein the Initial Shear Resistance is at least 15 pounds per square inch.

52. The releasable touch fastener of claim 51 wherein the Initial Shear Resistance is at least 20 pounds per square inch.

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53. The releasable touch fastener of claim 52 wherein the Initial Shear Resistance is at least 25 pounds per square inch.

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54. A method of releasably fastening two flexible surfaces together, the method comprising

securing a loop component to one of the surfaces, the loop component having a sheet-form loop base and an array of female fastener elements extending from the loop base;

20 securing a hook component to the other of the surfaces, the hook component having a sheet-form hook base and an array of male fastener elements extending from the base and configured to releasably engage the female fastener elements of the loop component, the hook and loop components configured to have an Engaged Thickness of less than about 0.11 inch and to provide a Final Peel Resistance of at least 0.3 pound per inch of closure width; and

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bringing the hook and loop components together in mating engagement.